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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/684,296	10/10/2003	Christopher L. Stone	03104	7918
23493	7590	02/24/2006	EXAMINER	
SUGHRUE MION, PLLC 401 Castro Street, Ste 220 Mountain View, CA 94041-2007			QIN, JIANCHUN	
			ART UNIT	PAPER NUMBER
			2837	

DATE MAILED: 02/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

8/1

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/684,296	STONE ET AL.	
	Examiner	Art Unit	
	Jianchun Qin	2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 January 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,22-27,29-33,36-43 and 45-56 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 32,33,36-43 and 45-50 is/are rejected.
- 7) ☒ Claim(s) 1,2,22-27,29-31,35,44 and 51-56 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/30/06</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Amendment***

1. Upon further consideration, the allowable subject matter of claim 34 as indicated in the last Office Action mailed on 12/29/2005 has been withdrawn and replaced by the following office action. Any inconvenience to the Applicant(s) is regretted.

### ***Claim Objection***

2. Claims 1, 2, 22-27, 29-31 and 51-56 are objected to because of the following minor informalities:

Regarding claims 1, 2, 22-27, 29-31 and 51-56, the Applicants are advised that anything enclosed in the parenthesis (e.g., claim 1, line 6) is not considered as part of the claims. It is suggested to change the phrases “ (referred to herein as a “note-on event”) ” into – or note-on event –, respectively in these claims.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2837

4. Claims 32, 33, 36-43 and 45-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fay (U.S. Pub. No. 20050056143) in view of Kay (U.S. Pub. No. 20040099125).

With respect to claims 32:

Fay teaches a method for dynamically assigning notes to be played by a musical synthesizer (Abstract) comprising: providing at least one note assignment table (Fig. 5); setting a predetermined number of channels for playing assigned notes (section 0014); determining the number of notes to be played at a current instance (sections 0044, 0054); using said note assignment table to assign each of said notes to a respective channel of said predetermined number of channels (sections 0042 and 0044-0046).

Fay does not mention expressly: said table comprising a preferential weighting note assignment.

Kay discloses a method and apparatus for processing an note series collected from a real-time source of musical input material (sections 0014 and 0015), and teaches: providing at least one note assignment lookup table, said table comprising a preferential weighting note assignment (sections 0243, 0251-0253 and 0257-0270).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teaching of Kay in the invention of Fay in order to provide an improved mechanism for assigning notes to be played by a musical synthesizer through which the randomness of the generated rhythmic and tonal patterns can be reduced (Kay, section 0005).

With respect to claims 33, 42 and 43:

Fay further teaches: wherein providing at least one note assignment table comprises providing a plurality of note assignment tables and wherein the method further comprises selecting one of the note assignment tables to assign each of said notes (sections 0042, 0044-0046 and 0052-0056); wherein each of said channels represent a single musical instrument (section 0014); and wherein each of said channels represent a sub-section of an orchestral section (section 0014).

With respect to claims 36 and 38:

Fay teaches a note allocation processor that includes the subject matter discussed above except for a sorted note list memory, and wherein said central processor sorts said notes according to the pitch of said notes and stores a sorted note list in said sorted note list memory.

Kay teaches a sorted note list memory, and a central processor sorts a note series according to the pitch of said note series and stores a sorted note list in said sorted note list memory (sections 0389 and 0449).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teaching of Kay in the invention of Fay in order to provide a simple mechanism to facilitate the processing of the note list (Kay, section 0254).

With respect to claim 37:

Fay further teaches: when the number of notes on said notes-on list is larger than the predetermined number of channels, the method further performs the steps of

identifying certain notes as supplemental notes; and performing additive polyphony to assign said supplemental notes to said channels (sections 0044-0051).

With respect to claims 39-41:

Fay further teaches: said assignment table comprises an orchestra algorithm (Fig. 3); said assignment table comprises a lookup table (Fig. 5); and said assignment table comprises an allocation map (section 0060).

With respect to claim 45:

Fay teaches a note allocation processor operable in conjunction with an input device and a note player, said note player having a predetermined number of channels (Abstract), said note allocation processor comprising: an input for receiving note signals from said input device (sections 0013 and 0014); an output for providing note assignment to said note player (section 0015); at least one note assignment table (Fig. 5); a central processor preprogrammed to obtain the number of notes and assign each note to a respective one of said channel according to said note assignment table (sections 0042, 0044-0046 and 0054).

Fay does not mention expressly: a note counter; and said table comprising a preferential weighting note assignment.

Kay discloses a method and apparatus for processing an note series collected from a real-time source of musical input material, comprising a note counter (section 0554).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teaching of Kay in the invention of Fay in order to

provide robust mechanism for obtaining the number of notes in a note series stored in memory (Kay, section 0554).

Kay further teaches: providing at least one note assignment lookup table, said table comprising a preferential weighting note assignment (sections 0243, 0251-0253 and 0257-0270).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teaching of Kay in the invention of Fay in order to provide an improved mechanism for assigning notes to be played by a musical synthesizer through which the randomness of the generated rhythmic and tonal patterns can be reduced (Kay, section 0005).

With respect to claims 46 and 48-50:

Fay further teaches: a channel comparison counter indicating the number of channels having been assigned a note (sections 0045-48, 0050 and 0054); a notes-on list memory storing all notes to be played at a given instance (section 0015); a notes-on list memory storing all notes to be played at a given instance, and wherein when the number of notes to be played exceeds said predetermined number of channels, said central processor designates selected ones of said notes on as being supplemental notes (sections 0044-0051); wherein each of said note signals represents one of: a single musical instrument, an orchestra section, and a non-musical instrument audio sound (sections 0014 and 0015).

With respect to claim 47:

Fay teaches a note allocation processor that includes the subject matter discussed above except for a sorted note list memory, and wherein said central processor sorts said notes according to the pitch of said notes and stores a sorted note list in said sorted note list memory.

Kay teaches a sorted note list memory, and a central processor sorts a note series according to the pitch of said note series and stores a sorted note list in said sorted note list memory (sections 0389 and 0449).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the teaching of Kay in the invention of Fay in order to provide a simple mechanism to facilitate the processing of the note list (Kay, section 0254).

#### ***Allowable Subject Matter***

5. Claims 1, 2, 22-27, 29-31 and 51-56 are allowed if amended to overcome the objection set forth in this Office Action.

Claims 35 and 44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Reasons for Allowance***

6. The following is an examiner's statement of reasons for allowance:



Regarding claims 1, 2, 22-27, 29-31 and 51-56, please see Applicant's response dated 01/31/2006 for reasons for allowance.

The primary reason for the allowance of claim 35 is the inclusion of the limitation that said preferential weighting note assignment table is one of a bottom weighting note assignment table and a top weighting note assignment table. It is this limitation found in the claim, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

The primary reason for the allowance of claim 44 is the inclusion of the limitation of providing one of a hard-note and soft-note instruction to each of said predetermined number of channels. It is this limitation found in the claim, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.


Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### ***Contact Information***

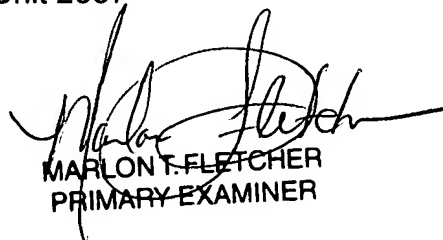
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jianchun Qin whose telephone number is (571) 272-5981. The examiner can normally be reached on 8am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula Bradley can be reached on (571) 272-2001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JQ   
February 21, 2006

Jianchun Qin  
Examiner  
Art Unit 2837

  
MARLON T. FLETCHER  
PRIMARY EXAMINER